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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/542,867  | 01/09/2006  | Tetsuro Shinoda      | 480230.401USPC      | 2405             |
| 500   | 7590        | 10/19/2007           |                     |                  |
| SEED INTELLECTUAL PROPERTY LAW GROUP PLLC<br>701 FIFTH AVE<br>SUITE 5400<br>SEATTLE, WA 98104 |             |                      | EXAMINER            |                  |
|   |             |                      | LEE, JAE W          |                  |
|   |             | ART UNIT             | PAPER NUMBER        |                  |
|   |             | 1656                 |                     |                  |
|   |             | MAIL DATE            | DELIVERY MODE       |                  |
|   |             | 10/19/2007           | PAPER               |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/542,867             | SHINODA ET AL.      |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Jae W. Lee, Ph.D.      | 1656                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 23 July 2007.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) \_\_\_\_\_ is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) 1-27 are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Application status*

Claims 1-27 are pending in the instant application.

### *Election/Restrictions*

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1, 4-8, 13-15, 18, 25 and 27, drawn to a DNA encoding a protein having a juvenile hormone acid methyltransferase activity, according to any one of (a) to (d) below: (a) a DNA encoding a protein comprising an amino acid sequence of SEQ ID NO: 2, 4, 6, 8, or 10; (b) a DNA comprising a coding region for a nucleotide sequence of SEQ ID NO: 1, 3, 5, 7, or 9; (c) a DNA encoding a protein comprising an amino acid sequence of SEQ ID NO: 2, 4, 6, 8, or 10, wherein one or more amino acids are substituted, deleted, inserted, and/or added; or (d) a DNA that hybridizes under stringent conditions with a DNA comprising a nucleotide sequence of SEQ ID NO: 1, 3, 5, 7, or 9; a vector inserted with the DNA of Claim 1; a transformed cell retaining the DNA of Claim 1; and an individual transformed with the DNA of Claim 1.

Group II, claim(s) 2, drawn to a protein encoded by the DNA of Claim 1.

Group III, claim(s) 3, 9-12, 23, 24 and 26, drawn to a DNA encoding an antisense RNA complementary to a transcription product of a DNA of Claim 1, and a vector, transformed cell, or individual with the DNA of Claim 3.

Group IV, claim(s) 3, 9-12, 23, 24 and 26, drawn to a DNA encoding an RNA having a ribozyme activity which specifically cleaves a transcription product of a DNA of Claim 1, and a vector, transformed cell, or individual with the DNA of Claim 3.

Group V, claim(s) 3, 9-12, 23, 24 and 26, drawn to a DNA encoding an RNA which inhibits the expression of a DNA of Claim 1 by an RNAi effect, and a vector, transformed cell, or individual with the DNA of Claim 3.

Group VI, claim(s) 16 and 17, drawn to an antibody that binds to the protein of Claim 2.

Group VII, claim(s) 19-22, drawn to a method of screening for a compound that binds to the protein of Claim 2, comprising steps (a) to (c) below: (a) contacting a test compound with said protein; (b) detecting the binding of the test compound and said protein; and (c) selecting a compound which binds to said protein.

In addition to the above election, please elect a single nucleic acid sequence from SEQ ID NOs 1, 3, 5, 7 and 9 and a corresponding single amino acid sequence from SEQ ID NOs 2, 4, 6, 8 and 10. This application contains claims directed to the following patentably products: SEQ ID NOs: 1-10. It is noted by the Examiner that this is not a species election.

These nucleic acid sequences and amino acid sequences are independent or distinct they represent structurally different sequences. Therefore, where structural identity is required, such as for hybridization or expression, the different sequences have different effects.

The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Where a group of inventions is claimed in an application, the requirement of unity of invention shall be fulfilled only when there is a technical relationship among those inventions involving one

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or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. Adams et al. ( ADAMS, MD. et al., Extended UniProtKB Entry Viewer - UniProt [the Universal Protein Resource], UniProt Accession No. Q9VJK8, May 1, 2000) teach a DNA sequence that encodes a protein comprising an amino acid sequence that is 99% homologous to SEQ ID NO: 4 (please see the attached sequence alignment result), which corresponds to the limitation of claim 1, in the recitation of "[a] DNA encoding a protein having a juvenile hormone acid methyltransferase activity, according to any one of (a) to (d) below: (a) a DNA encoding a protein comprising an amino acid sequence of SEQ ID NO: 2, 4, 6, 8, or 10; (b) a DNA comprising a coding region for a nucleotide sequence of SEQ ID NO: 1, 3, 5, 7, or 9; (c) a DNA encoding a protein comprising an amino acid sequence of SEQ ID NO: 2, 4, 6, 8, or 10, wherein one or more amino acids are substituted, deleted, inserted, and/or added; or (d) a DNA that hybridizes under stringent conditions with a DNA comprising a nucleotide sequence of SEQ ID NO: 1, 3, 5, 7, or 9," and thus, the shared technical feature of the groups is not a "special technical feature", unity of invention between the groups does not exist.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Because these inventions are unrelated and distinct for the reasons given above, have acquired a separate status in the art as shown by their different classification, and the literature and sequence searches required for each of the Group is not required for another thereby presenting a search burden on the Examiner, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jae W. Lee whose telephone number is 571-272-9949. The examiner can normally be reached on 8:00-4:30.

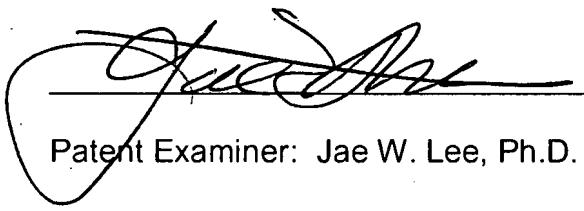
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr Bragdon can be reached on 571-272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Patent Examiner: Jae W. Lee, Ph.D.



RICHARD HUTSON, PH.D.  
PRIMARY EXAMINER